STATEWIDE STRATEGIC INFORMATION TECHNOLOGY PLAN
FY 2004 - 2007

October 2003
Version 1.0

October 27th, 2003

The Honorable Craig R. Benson
Governor, State of New Hampshire
Concord, New Hampshire 03301

Dear Governor Benson,

The Office of Information Technology is pleased to present the State of New Hampshire's SFY 2004-2007 Strategic Information Technology Plan. This document represents a comprehensive collection of key initiatives and themes that are vital to realizing our State's technology vision.

In New Hampshire state government, technology plays a critical role in every aspect of our business. Advanced technology solutions enable, empower, and enhance the services we are able to deliver, stimulates employee productivity and most importantly establishes a meaningful guidepost of the efficiencies we must achieve. Implementing technology in a responsible, consistent and effective manner ensures we will deliver upon the business goals of state agencies.

In this document you will get a direct understanding of the current technology solutions the state is focused on implementing. In transitioning to the information sharing goals of our Strategic Technology Plan, many stakeholders benefit. From citizens and businesses to state employees, vendors, and others, our impact on each will be positive, far-reaching and significant.

Both in scope and method of creation this Strategic Information Technology Plan differs from the one created in the last biennium. By employing a collaborative process and applying the goals, objectives and principles of the new Office of Information Technology, our cross sectional team of the State's senior technology experts reviewed the technology needs of all agencies. Each Agency had the opportunity to not only submit a written plan, but also to personally present their technology needs to the SITP review committee. This process helped align agency technology and business needs to our statewide technology agenda. The byproduct was a better understanding of how we can implement efficient solutions, reduce redundancies, and streamline our approach in delivering innovative technology solutions across all agencies.

I would like to thank all the people that contributed their time and effort in creating this SFY 2004-2007 Strategic Information Technology Plan.

Respectfully,

Robert Anderson
Chief Information Officer

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NH Statewide Strategic IT Plan SSITP 2004-07   **September 2003**
Office of Information Technology (OIT)

Executive Summary

Authority. The Office of Information Technology (OIT) is pleased to present the State of New Hampshire Statewide Strategic Information Technology Plan, SSITP 2004-07. This plan represents findings of the Office of Information Technology and is in conformance with the guidelines contained in the RSA Chapter 4-D:3, Laws of 2003, regarding development and implementation of a State long-range information technology plan.

Primary Goal. The *primary goal* of developing a State of New Hampshire Statewide Strategic Information Technology Plan (SSITP) is to bring technology and information systems into alignment with the various program mission goals and objectives of all State agencies. This comprehensive effort establishes an updated Statewide Strategic Information Technology Plan that provides State leadership with:

> ➢ a useful management and decision-making document;
>
> ➢ a tool which supports Agency Strategic Business Plans;
>
> ➢ documented strategies for more efficient use of technologies;
>
> ➢ a list of technology priorities;
>
> ➢ communication of our intentions;
>
> ➢ direction for the acquisition of computer software, hardware, and services; and,
>
> ➢ an approach which provides for information sharing statewide.

World Class IT Organization. In essence, it compels all State Agencies to benefit from vigorous participation in regular planning and review activities.

Office of Information Technology Mission:

"create and sustain an IT environment that supports each agency's mission, goals, and objectives while ensuring the careful and responsible management of the State's IT resources."

To fulfill the mission of the State of New Hampshire government, the state will adapt to changing business needs using technology and innovation. One of the State's objectives is to promote a "world class" Information Technology organization to meet or exceed State of New Hampshire agency Information Technology needs and to provide exceptional customer services.

Efficiency for State Government. This statewide Strategic Information Technology Plan has a number of focus areas, but the one that stands above all others is to leverage technology to *bring efficiency to state government*!

Inconsistencies and Unnecessary Duplication. The State has identified 14+ different State Helpdesks with *unnecessary duplication* of support services in almost every agency. The State email

The Office of Information Technology (OIT) is committed towards supporting Governor Craig Benson's efficiency initiatives and the legislation that was signed into law (Governor's efficiency in Government commission, HB171 of the 2003 legislative session).

This technology plan is focused on:

1. Promoting Efficiency

2. Encouraging Cost Savings

3. Enhancing Accountability and Control

4. Improving Coordination

5. Reducing redundancy in state government

architecture contains no common mail directory and utilizes a handful of different hosting servers. The Wide Area Network (WAN) utilizes multiple vendors and provides, wasteful, duplicitous services. Web application development is provided through various resources with little commonality. In summary, technology solutions throughout the State are *inconsistent* from agency to agency with regard to approach, delivery, and ongoing support.

Strategic Issues. Through the Statewide SITP we have identified the following *Strategic Issues,* in priority order, for improved use of technologies. To address the needs, the state will continue to focus on customer services by providing resources for:

> ➢ Common IT Services and Solutions;
>
> ➢ Enterprise Infrastructure;
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> ➢ e-Government IT Services;
>
> ➢ Shared Multi-Agency IT Solutions;
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> ➢ Agency Specific IT Solutions;
>
> ➢ Emergency Preparedness.

IT Drivers. Further, we have a responsible leadership team within the Office of Information that ensures that the following *IT Drivers* are considered with every solution:

> ➢ Centralize Common Services and Solutions;
>
> ➢ Consistent Deployment of IT Solutions;
>
> ➢ Consistent IT Procurement and Contracts;
>
> ➢ Deliver Innovative IT Solutions;
>
> ➢ Enhance Service Delivery;

> ➢ Remove Unnecessary Redundancies;
>
> ➢ Security; and
>
> ➢ Survivability.

Business Needs. To address the needs in an efficient and effective manner, the Office of Information Technology is pleased to provide this Statewide Strategic Information Technology Plan (SSITP) to ensure our preparedness to adapt to *changing business needs* through technology and innovation. Appendix A describes the Areas of State Government and Local Government. *Agency SITP Review Process.* To develop this Strategic Plan, a SITP Review Panel met with each agency early into the new biennium. Agency business leaders and IT managers highlighted their Agency's mission, strategic issues, business needs, and Information Technology projects during an one hour presentation period. Using this Agency information, core strategic information technology solutions and services were identified by the SITP Review Panel. A database containing all the Agency IT Projects allowed the SITP Review Panel to view similar IT projects statewide. Appendix B provides a flowchart of the Agency SITP review process and Statewide Information Technology Plan development.

Development of the Statewide SITP (SSITP). Following the Agency SITP presentations, the SITP Review Panel identified *common themes*, *needs*, and *redundancies* of the State. This review process enabled the Office of Information Technology's management team to focus their efforts, identify IT Projects, and understand agency needs. Although the State has made progress in some areas to date, there remains much to be done before the State reaches its goals for greater efficiency.

1.0   Office of Information Technology

1.1   Office of Information Technology Organization

RSA Chapter 4-D:3, Laws of 2003, established the Office of Information Technology (OIT) on July 1, 2003, within the Office of the Governor. The Office of Information Technology is led by the Chief Information Officer, a position appointed by the Governor. The Office of Information Technology is responsible for managing and coordinating all technology resources in the executive branch of government, developing and implementing strategies to enhance state customer service, and creating statewide efficiencies through the use of information and other technologies.

These responsibilities include developing a formal information technology planning process for approving agency information technology plans, preparing and maintaining a statewide information technology plan based upon agency plans, and reviewing, assessing, and approving the feasibility of agency plans, including cost estimates and impacts on other agencies and political subdivisions of the state.

Migration of State agencies to the Office of Information Technology will occur in a planned fashion. The first phase brought funding and a total of 315 staff, from nine of the larger agencies. All agencies are expected to be migrated by the end of the SFY 2004 - 2005 biennium. Additional information about the Office of Information Technology can be found at http://www.nh.gov/technology/ .

1.2   Office of Information Technology Mission

"The State of New Hampshire will create and sustain an IT environment that supports each agency's mission, goals, and objectives while ensuring the careful and responsible management of the State's IT resources."

1.3   Office of Information Technology Vision

"To create one unified IT organization within the State of New Hampshire that meets or exceeds all our agency needs, while limiting redundancies, managing costs, maximizing vendor relationships, and delivering innovative technology solutions."

1.4   Office of Information Technology Drivers

The Office of Information Technology Management has identified the following *Information Technology Drivers* that will be considered with every solution:

- ➢ Centralized Common Services and Solutions;
- ➢ Consistent Deployment of IT Solutions;
- ➢ Consistent IT Procurement and Contracts;
- ➢ Deliver Innovative IT Solutions;
- ➢ Enhance Service Delivery;

> ➢ Ensure All Agency IT Needs Are Satisfied;
>
> ➢ Flexibility;
>
> ➢ Leverage Technical Knowledge;
>
> ➢ Manage IT Costs;
>
> ➢ Maximize Technology to Drive Efficiency;
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> ➢ Protect Privacy;
>
> ➢ Remove Unnecessary Redundancies;
>
> ➢ Security; and
>
> ➢ Survivability.

1.5   Information Technology Goals and Objectives

The Office of Information Technology has set the following Goals and Objectives to bring technology and information systems into alignment with the various program mission goals and objectives for all state agencies.

Build a World Class Information Technology Organization
> ➢ IT Team - create one unified State of NH Information Technology organization
> ➢ IT Staff Members – maintain a well-trained and motivated staff with avenues for personnel and professional growth

Centralized Common Information Technology Services and Solutions
> ➢ Provide utility-like common services to all state employees
> ➢ Align similar agency needs and deliver integrated functional solutions

e-Government Solutions
> ➢ User friendly web-based integrated solutions
> ➢ Focus on state government, business, citizen and employee based solutions

Emergency Preparedness
> ➢ Disaster recovery solutions
> ➢ Responsiveness to management for business continuity

Exceptional Information Technology Customer Service
> ➢ Service delivery methodology and quality tracking metrics
> ➢ Software development and design methodology

Information Technology Budget and Expenditure Tracking
> ➢ Reduce costs, manage spending, and track return on investment
> ➢ Consistent IT Procurement, leverage buying power of the state

Information Technology Operational Effectiveness
> ➢ Limiting agency redundancies
> ➢ Maximize vendor relationships

Meet or Exceed Agency Information Technology Needs
- ➢ IT that enables agency business requirements and solutions
- ➢ IT organization that is tightly integrated with agencies

Research New Applications and Technologies
- ➢ Deliver innovative technology solutions
- ➢ Increase efficiency by using technology

State Government Communication and Connection
- ➢ Open communication with municipal government
- ➢ Meet the needs of citizens and businesses in the state

Strategic Information Technology Plan
- ➢ Each agency to maintain a Strategic Information Technology Plan (SITP)
- ➢ Overall statewide strategic information technology plan highlights technology direction (updated annually)

2.0 Information Technology Trends

The themes, opportunities, and challenges stated below are an extension of the key findings discovered during the development of this plan. In addition to providing important baseline information, the analysis of the current environment led to the specific strategic issues and action items presented in this plan.

2.1 Themes

There are three major themes that are the driving forces behind the need to change the way State government functions:

    (1) The impact of continuous technological innovation;
    (2) the evolution of e-Government;
    (3) the need for a statewide approach to IT governance.

2.1.1 Continuous Technological Innovation

Technological innovation has been periodically punctuated by dramatic shifts that have driven broad, fundamental change, such as the shift from mainframes to PCs. Today, the technological shift is to the Internet.

The Internet is having a profound impact on the way citizens and businesses manage their daily operations. Internet technology, with its emphasis on communication and connectivity, is driving the demand for digital access and interaction with state government. In fact, the Internet is providing the State with a rare opportunity to examine and fundamentally redesign the way it delivers government services and information.

Technological innovation and Internet technology are the key enablers behind the evolution of new digital service delivery systems that encourage and support citizen self-service. The *2002 State New Economy Index* published by the Progressive Policy Institute reported that New Hampshire ranks 2nd in the

percentage of adults with Internet access (Alaska ranks 1st at 69% and Minnesota is tied with New Hampshire at 64%). With such a high degree of Internet penetration in the State, it is easy to see why New Hampshire's citizens and businesses expect digital access to government services and information.

2.1.2 e-Government

Traditionally, government information and services are delivered through manual, paper-based processes and one-to-one personal contact with government employees. The term e-Government describes a new channel for government interaction with constituents that is based on digital technology and can produce significant improvements in service levels and efficiency. The key to these improvements will be transforming government's interaction with its constituents to allow them to access services directly through self-service, while still providing personal interactions when needed.

As part of the Strategic Information Technology Planning process, a document entitled, *State of New Hampshire e-Government Strategy and Architecture,* was written. More information contained in this document can be found at http://www.nh.gov/technology/. That document defines, plans, and communicates the State's e-Government strategy and architecture. The adoption of e-Government is the first step in transforming the relationship between New Hampshire's citizens and their government. The strategies that follow in this plan are designed to help agencies overcome existing boundaries and work together to create seamless services for the customers and stakeholders who use them.

2.1.3. Statewide Approach to IT Governance

A statewide approach to IT governance maximizes efficiencies and creates employee empowerment. Moving to a statewide governance model will be done methodically, building on success throughout the transition. The first step involves bringing together a community of stakeholders to establish statewide principles, policies, standards, and strategies in a manner that does not impede innovation or flexibility at the agency level.

Establishing technology councils and working groups is essential for tackling statewide strategic issues and for building consensus. The entire model is dependent on leadership and developing buy-in across state government. New Hampshire State government must adopt a philosophy of embracing change, creating a common vision, and developing the proper governance structure required to facilitate the change process. The legislation enabling the Office of Information Technology also created the Legislative Oversight Committee, consisting of three House and three Senate members, to provide oversight for implementation of strategic plans, organization changes and financial tracking. In addition, technical committees will be created to develop detailed plans for managed support services, asset management, quality of service delivery, IT operations and Web content management.

2.2 Opportunities

To fulfill the Office of Information Technology's mission, the state is afforded several opportunities to use and deploy technology. Some of these opportunities are listed below.

➢ Embrace a statewide view with regards to deploying IT by educating the public and all levels of government that IT is not a separate resource; it is inherent to the delivery of all government information and services.

➢ Use available technology to make State government more convenient, more accessible, more efficient, and more responsive for all citizens and businesses.

➢ Develop online services that are secure and reliable, which in turn will result in improved service levels while encouraging participation from all user groups.

➢ Improve business processes before automating them in an effort to maximize savings and make government less costly to operate in the long run.

➢ Explore and utilize alternative sources of funding.

➢ Modify the State's IT governance structure from an agency-based management and coordination structure to one that balances the requirements of the agencies while leveraging statewide opportunities.

➢ Spur economic development by improving the State's IT infrastructure, reducing the burden placed on businesses and citizens, and making it easier and more attractive to conduct business in New Hampshire.

2.3 Challenges

The State of New Hampshire's transition to e-Government and coordinated IT governance brings with it several challenges that must be overcome. Some of these challenges are listed below:

➢ A significant challenge for the State is gaining commitment to recruit, develop, and retain an adequate number of IT professionals.

➢ Achieving the State's goals will require cooperation among government entities and the private sector.

➢ Deployment of digital services will require significant investment and maintenance. Even as the cost of technology declines, overall IT spending may rise as the demand for e-Government applications increases and a new IT infrastructure is established.

➢ Digital government must engage as many citizens as possible, not just those who are the easiest to reach.

> ➢ Marketing the availability of new e-Government applications is expensive and time consuming. It is critical that the State deliver the services its constituents need and want, while building trust and customer satisfaction.

> ➢ State laws may need to be updated in order to support new digital governance constructs, particularly in the areas of privacy and security. Success is highly dependent on the protection of citizens' personal information.

> ➢ The careful and responsible management of the State's IT resources is contingent upon conducting meaningful cost/benefit analyses and exploring relevant alternatives. It is the only way to measure return on investment in an effort to capture tangible cost savings and re-direct those savings to fund the development of future e-Government services.

3.0   Core Strategic Information Technology Issues

As the Office of Information Technology has investigated and mapped the IT issues facing the leadership team, there has been an identification of specific strategic IT Issues that Office Information Technology can address for all State government.

The Strategic IT Issues fall into six major target solution areas that can then be addressed through specific projects. The core strategic Information Technology Issues are:

   3.1   Common IT Services and Solutions:
            3.1.1 Management;
            3.1.2 Operations;
            3.1.3 Support Services.

   3.2   Enterprise IT Infrastructure;
   3.3   e-Government IT Services;
   3.4   Shared Multi-Agency IT Solutions;
   3.5   Agency Specific IT Solutions; and
   3.6   Emergency Preparedness.

3.1   Common IT Services and Solutions

IT spending will be streamlined and optimized to achieve long-term cost reductions by consolidated deployment of IT services and/or solutions required to some extent by all or nearly all agencies.

Our current environment of agency IT independence requires that common services and activities occur across many agencies. The IT costs to the State of unnecessary redundancies is now well documented: diverse technologies, inflated staffing and training requirements, duplication of facilities and equipment, inefficient and costly procurement initiatives, non-standard delivery of services to our customers and inequitable distribution of IT funding and support. Unnecessary redundancies and inefficiencies also occur for IT support, operations, applications, licensing, data centers, networks, and other infrastructure issues.

3.1.1 Management

• **Architecture**	• **Fiscal Operations**	• **IT Organization**
• **IT Training**	• **Life Cycle Management**	• **Project Management**
• **Strategic IT Planning**	• **Standards**	

Management of IT solutions and services will address at a minimum:

Architecture. The State is looking to establish an *enterprise architecture* that supports the local agencies and from an enterprise perspective, brings about efficiencies in IT support and licensing of software products to the state. This balance requires a thorough understanding of agency IT needs and must be agile enough to mold to the constantly changing direction of the industry and national initiatives.

Fiscal Operations. Separate funding sources and obstacles to effect an enterprise view for planning and acquisition of IT in the state has caused inefficiencies and difficulties in leveraging the state's IT acquisitions. Through centralized IT *Fiscal Operations* improved budgeting and acquisitions will be seen.

IT Organization. IT resources dispersed throughout the state has resulted in duplication of efforts, many times a lack of coordination, limited cross training among the IT professionals. Through a centralized *IT organization*, the state will realize greater coordination of efforts, cross training and greater depth in expertise, and minimal duplication of effort in researching and implementing IT solutions.

IT Training. *IT training* has long been done on an individual agency basis and only recently have statewide contracts been available to the agencies. Better publicity and coordination of training sessions will further complement the IT Training contracts.

Life Cycle Management. Although *life cycle management* has been practiced in the state for IT assets and solutions, it has been practiced in a variety of ways and for different lengths of time. Through a centralized approach, consistency of approach and standard definition of how long the "life cycle" should be will result. Also through a centralized approach, IT solutions will be consolidated, resulting in further efficiencies for the state.

Project Management. Project management varies by agency relative to the resources committed and the standards being followed. An office of Project Management has been established to address this issue and to facilitate tracking top IT projects in the state to begin Project Management performance measurements.

Strategic Information Technology Planning. Strategic Information Technology Plans (SITP) are generated at two levels in the state. At the first level, at the agency level where the individual agency mission and needs are reviewed and

identify what Information Technology solutions meet these agency needs. At the second level, a cross functional team from the Office of Information Technology Management has established a SITP review process to review these agency SITPs and then build upon the agency information to develop a new four year Statewide Strategic Information Technology Plan (SSITP) for each biennium. The SSITP then provides guidance information back to the agencies for their local IT Projects and in the development of their next agency SITP.

Standards. The state has published an initial set of Information Technology *standards*, and the planning process has identified the need to establish additional standards for the many software application and hardware requirements of the state. A flow chart to develop cross-functional standards has been proposed for use by the new Office of Information Technology to facilitate the establishment and periodic review for all IT standards.

3.1.2   Operations

• **Data Center Operations**	• **Database Administration**
• **Data Warehousing**	• **Server/Application Hosting & Support**

Centralization of IT operations will eliminate many agency-supported common IT operations services and activities. Key areas of centralization will be:

Data Center Operations. The State presently operates 55 computer rooms. While many of these are server closets and LAN nodes, those *data operations centers* that serve multiple agencies will be consolidated to realize efficiencies.

Database Administration. Database Administration requires a specialized skill set. The State will consolidate database platforms and implement multi-agency support.

Data Warehousing. Data Warehousing technology allows partitioning of resources and thus can support multiple applications on single platforms. This will realize equipment and staff efficiencies.

Server/Application Hosting. The same opportunities exist for *server/application hosting and support*. Equipment, facilities and support services will be configured to realize maximum efficiency.

3.1.3   Support Services

• **Desktop Support**	• **Hardware Maintenance**	• **Help Desk**
• **Messaging**	• **Network Services**	• **Office Productivity**
• **Procurement**	• **Web Hosting**	

Centralization of IT support services will also eliminate many agency-supported common IT support services and activities. Key areas of centralization will be:

Desktop Support. Desktop support is not uniform across the State. Support varies and agencies utilize different contracts or software to provide those services. Consolidated support, with adequate training for all users, and use of the same office automation software will be planned and/or implemented this biennium.

Hardware maintenance. Hardware maintenance, purchases, and support are inconsistent and not leveraged across the state. Efforts are underway to consolidate maintenance contracts, make aggregated purchases, and provide support for all agencies, no matter how small.

Help Desk. The Office of Information Technology has identified 14+ different State *help desks* with duplication of service, software, and contracts in almost every agency. Consolidation of support, contracts, and software products is expected to occur this biennium.

Messaging. The State *messaging* architecture contains no common mail directory and utilizes a handful of different hosting servers. Standardization of the mail services is a next step and a central post office will be implemented this biennium to facilitate reduced support requirements for the state.

Network Services. Intra-office connectivity and support must be accomplished at all but the smallest agencies. A pool of network administrators from the Office of Information Technology will provide network support to all agencies. This will increase standardization and interoperability while freeing agency resources for tasks specific to that agency.

Office Productivity. Office productivity software varies throughout the state although the Microsoft Office suite is most prevalent. To enhance the reach of our office productivity software, remote connectivity needs are almost universally noted in agency technology projects and presentations. This translates strategically into a directive that OIT must provide the appropriate connection speed, security, availability and capacity so that the collection and distribution of technology solutions from source to consumer is improved each biennium.

Procurement. IT Procurement is inefficient when done on an agency basis, "mass" buys are not leveraged and unnecessary duplication of effort occurs. The goal is to streamline and centralize IT Procurement as appropriate.

Web Hosting. Web Hosting is currently done at an Agency level. To take optimum advantage of the Enterprise Infrastructure, web hosting will be deployed centrally when possible.

3.2   Enterprise IT Infrastructure

• **Building Blocks**	• **Cable Plants**	• **Consolidation of Data**
• **Fiber Installation**	• **Security**	• **Standards**
• **WAN Efficiencies**		

An *Enterprise IT Architecture* is critical to the state if we are to meet the challenge of e-Government successfully. The ability to use common solutions identified in the e-Government architecture, e.g., e-payment, is enhanced through an *Enterprise IT Architecture*. This architecture is critical for the state to also realize effective disaster recovery and business continuity for IT resources.

Building Blocks. E-Government and the new enterprise approach to IT solutions requires that there are basic building blocks the state must implement to meet these needs. These *Building Blocks* are driven by the *Enterprise Architecture* and must be supportable and flexible to meet the missions of the state agencies in an efficient manner.

Cable Plants. The visible components of technology, desktops, networks, software, etc., are obvious categories that are upgraded as budgeting and dependent applications permit. Building infrastructure, in particular connecting *cable*, is a less visible, but none-the-less critical component of IT which must be modernized. During new building and renovations, integrated wiring for voice and data will become standardized. Existing buildings, particularly those that are rented, provide greater challenges.

Consolidation of Data. E-Government drives the need for consistent, up-to-date, and accurate data that is readily available to the public and others. *Consolidation of Data* and efficient use of IT storage will move the state in the direction of efficient management of the state's data.

Fiber Installation. High bandwidth *fiber* cable, both within and between buildings in the greater Concord area, will facilitate centralization initiatives and separate the dependency of support services on hardware location. State-owned fiber will eliminate the recurring costs associated with telephone company connectivity.

Security. As the State moves into the e-Government arena, added pressure is applied to *IT security* and protection of information, twenty four hours a day seven days a week. IT security is not only provided by the technical capabilities of the software and networks the State implements, but also the policies, procedures, management controls, and audits must be in place. The State will continue to be diligent in IT security and the Office of Information Technology will publish statewide guidance in this area to protect the information the State holds electronically.

Standards. *Standards* are one of the means by which the State will be able to economize its expenditures and support for IT in the State. Standards will also allow more efficient IT procurement where the purchase is "mainstream" and needs little review, versus those unique IT acquisitions where more thorough support and scrutiny is necessary.

WAN Efficiencies. Adequate, cost effective connectivity that facilitates the conduct of State business is an underlying, mission-critical strategic concern. Several tasks will converge to

meet those challenges during the biennium. Core connectivity and capacity issues have become impediments to efficiency and a set of initiatives is currently funded to resolve these impediments. As core issues are resolved, the strategic initiative must carry forward to our outlying offices and points of presence / operations, across all agency and political subdivision boundaries. An equal concern is to eliminate redundant service connections that don't maximize the cost of provision – typically referenced as WAN efficiencies. This initiative will include the convergence of voice and data systems.

3.3 e-Government: New Hampshire's Vision and Strategic Direction

• **e-Commerce**	• **e-Democracy**
• **e-Management**	• **e-Services**

E-Government is defined as the ability for State Government to conduct business over the Internet with its citizens, business, local governments, and its employees.

3.3.1 e-Government in New Hampshire

What is e-Government? E-Government is "the use of information technology to support government operations, engage citizens, and provide government services". Within this broad definition are four dimensions, a reflection the functions of government itself:

➢ *e-Commerce* is the exchange of money for goods and services over the Internet such as citizens renewing vehicle registrations, or government buying office supplies.

➢ *e-Democracy* is the use of electronic communication tools, such as e-mail and the Internet, to increase citizen participation in the public decision-making process.

➢ *e-Management* is the use of information technology to improve the management of government, from streamlining business processes to improving the flow of information within government offices.

➢ *e-Services* is the electronic delivery of government information, programs, and services often (but not exclusively) over the Internet.

New Hampshire state agencies have a number of initiatives in place that provide information and services which allow customers to transact business with the State. New Hampshire devotes significant resources to IT, which is indicative of the value that the State places on using information technology as a tool to improve its operations.

New Hampshire's current e-Government initiatives have been the result of action on the part of individual agencies. In many instances, they identified a need and

developed a solution for it. Often times, however, each agency operated independently from others. This lack of cohesiveness in the development and implementation of services keeps the State from focusing on all the needs of its customers. The net result is a disparate collection of agency web sites rather than a single, coordinated presence. To be successful in future e-Government initiatives, the state must incorporate an easy-to-use organizational structure that is implemented through a central enterprise portal architecture, with robust services, integrated applications, and a focus on customer needs and support.

3.3.2   Strategic Direction

The State of New Hampshire has made the first significant step towards robust e-Government services through the consolidation of IT resources under the Office of Information Technology. This consolidation provides a framework to launch multi-agency projects and leverage existing resources.

To ensure success, any e-Government initiative must address the following barriers:

> ➢ *Leadership Support* – Address current policies and practices that focus on agency ownership rather than only customer needs;

> ➢ *Funding* – Provide financial and staff resources to bring initiatives from conception through delivery;

> ➢ *Communication* – Foster inter-agency *communications* on various e-Government initiatives and open communications between an agency and its customers.

The Office of Information Technology will begin the process of migrating from agency-centric solutions to enterprise ones. This will be accomplished through the following e-Government initiatives:

I.   New Hampshire Portal Services – Development of "one-stops" through which all information and services on a particular topic or for a particular user-type can be reached or used. The portal employs a common navigation system and utilizes shared services to support common features. Examples include:

> ➢ State portal – www.nh.gov;
> ➢ Business portal – www.business.nh.gov (*under development*);
> ➢ Grants portal – www.grants.nh.gov (*under development*).

II.   *Enterprise-wide applications*. Implementation of *enterprise-wide applications* that provide standard infrastructure for common tasks is critical to successful implementation of e-Government in the State. Rather than each agency acting independently, the Office of Information Technology will lead the process to set up solutions that are based on practices such as "collect once, use many". Examples of initiatives currently underway include:

> ➢ Application Development;
> ➢ Content Management;
> ➢ E-Licensing applications;
> ➢ Merchant Services; and
> ➢ Web Hosting.

     III.   *Performance metrics* will be developed to establish priority of e-Government initiatives and ensure their success.

3.4   Shared Multi-Agency IT Solutions

• *Asset Management*	• *Case Management (Legal)*	• *CAD/D*
• *Content/Document Management*	• *Data Warehouse*	• *e-Government Arch*
• *Enterprise Resource Planning*	• *Facilities Management*	• *Fleet Management*
• *Geographic Info Systems (GIS)*	• *Lab Info Management Sys (LIMS)*	• *License/Permit Sys*
• *Video Teleconferencing*		

There are services required by some agencies, but not all, and opportunities for the State to optimize evaluation of technologies, support, licensing costs and information sharing.

The need to provide shared agency solutions at a statewide level is a key strategic initiative. Identification and selection of a common set of information systems for use in specific business areas would achieve this. To accomplish this, State agencies requesting new information systems or upgrades to outdated systems, will utilize a shared State solution. The benefits of a single technological approach in meeting needs will be an overall streamlining of government, resulting in a reduction of redundancies, improved efficiencies, and a lower total cost of ownership.

This strategic approach will allow improved information sharing across agency levels and provide improved services to the public. Additionally, the State should realize significant operational cost savings. Consolidation of services, including product licensing, product supports, and vendor contracting, are areas where savings will be realized. Under this vision, it would be reasonable to expect that an individual would <u>not</u> need to provide the same demographic information to multiple agencies for different licenses or permits.

Shared *Multi-Agency IT Solutions* that are envisioned to be addressed this biennium are:

    SH-01   *Asset Management* – the capture of asset data at the time of purchase, asset tracking, depreciation and reporting, including GASB34 requirements.

    SH-02   *Case Management (Legal)* – organization and management of various documents, photographs and other forms of information by business area.

    SH-03   *Computer Aided Design and Drafting (CAD/D)* – development of plans/designs by business area: buildings, roadways, bridges, other.

    SH-04   *Content/Document Management* – storage, retention, retrieval and sharing of electronic content, documents, video, voice, and other electronic objects by business area.

SH-05   *Data Warehouse* – on-line analytical processing and reporting using business intelligence tools, including the ability to generate charts and graphs.

SH-06   *e-Government architecture* – the foundation architecture to support web-based services for transacting business with the State such as licenses, permits, applications, i.e., access, content, user interface, transaction, data, application, hosting.

SH-07   *Enterprise Resource Planning (ERP)* – financial accounting, budgeting, purchase & procurement, human resources, payroll, employee benefits, consumable inventory, grants/project management, other.

SH-08   *Facilities Management* – preventive maintenance, work orders, space management, supply management, insurance, energy usage of buildings, other.

SH-09   *Fleet Management* – vehicle parts inventory, parts warranties, fuel usage, preventive maintenance scheduling, vehicle mileage, insurance, operator assignments and overall repair, work order history to effectively manage a fleet of vehicles.

SH-10   *Geographic Information System (GIS)* – spatial reference of data by business area: transportation, hydrology, utilities, boundaries, parks/forests, airports, other.

SH-11   *Laboratory Information Management System (LIMS)* – tracking and reporting of laboratory samples through various testing, in accordance with industry standards by business area.

SH-12   *Licensing/Credentialing/Permitting* – activities associated with the function of issuing licenses, credentialing, and permits, including issuance, renewals, investigations, education, payment, other.

SH-13   *Video Teleconferencing* – communication via video for meetings, training, hearings, other, specific to business area, both within State and outside State boundaries.

3.5   Agency Specific IT Solutions

• ***Business Registration Portal***	• ***MAAP On-line***	• ***Electronic Vendor Payment***
• ***Electronic Vendor Claims***	• ***EZ PASS***	• ***HAVA***
• ***Legislative Records On-Line***	• ***HIPAA***	• ***J-One***
• ***Partners (Smart Card)***	• ***Septic Designs On-line***	• ***Tax Filings On-Line***
• ***Unemployment Claims***	• ***Union Catalog On-Line***	• ***Utility Filings / Hearings***
• ***Vital Records On-Line***	• ***Water Quality Web Site***	

*This listing of Agency IT Solutions is only a small representation of all Agency IT Projects.

State agencies, because of their unique missions, will continue to need A*gency Specific IT Solutions*. The state, however, can sometimes learn from these solutions and possibly apply these "lessons learned" to other agency IT solutions. The following short list of *Agency Specific IT Solutions* exemplifies the unique and varied solutions of the state.

The following listing provides a brief description of each of the Agency unique IT projects:

> ➢ *Business Entity Registration Portal* – the Secretary of State is implementing a new *Business Entity* support system that will allow starting in 2004, electronic filings of Annual Reports, on-line research and copies of Corporation and trademark information, and on-line certificate application.

> ➢ *EZ PASS* – the Department of Transportation electronic Toll Collection system that has been implemented throughout the Northeastern United States.

> ➢ *Electronic Vendor Payment* – the State Treasury intends to implement electronic vendor payments, an efficient means for the State to make payments.

> ➢ *Electronic Vendor Claims* – the Department of Education is allowing providers of Child and Adult Day Care to file payment claims on-line, drastically reducing processing time.

> ➢ *HAVA – Help America Vote Act*, the State wide on-line voter registration system.

> ➢ *HIPAA – Health Care Portability Accountability Act*, the State will continue to meet Federal requirements for privacy of electronic personal health information.

> ➢ *J-One – the "*One Network Environment for Justice" task group intends to build an electronic, integrated criminal justice system for New Hampshire connecting critical state agencies, the Courts, and local law enforcement.

> ➢ *Legislative Records On-Line* – the scanning of Legislative records and posting them to the Web.

> ➢ *MAAP On-Line* – the Department of Safety's goal with the Municipal Agent Automation Project (MAAP) is to enable the State's Municipal Agents to process vehicle registrations locally and update the State's DMV database real time without State intervention.

> ➢ *PARTNERS (Smart Card)* – the New England PARTNERS Project is a joint initiative of the States of Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont to develop and implement a smart card-based Electronic Services Delivery (ESD) system to meet the services and benefit needs of common clients linking a variety of public health and human service programs, including the WIC program.

> ➢ *Septic Designs On-Line* – the Department of Environmental Services has the goal of allowing Septic CAD plans, with applications, payments and licenses to be submitted on-line to reduce the cycle time to final State approval.

> ➢ *Tax Filings On-Line* – allows Tax Payers to file returns and payments on-line meals and rooms, real estate transfer, and some other taxes.

> ➢ *Unemployment Claims* – allows claimant to file over the Internet for unemployment claims.

➢ *Union Catalog On-Line* – the Department of Cultural Resources will host a statewide library system to inventory library holdings over the web.

➢ *Utility Filings and Hearings on-Line* – the PUC will provide audio broadcasts of their Hearings through the Web and allow electronic filings by Utilities.

➢ *Vital Records On-Line* – provide on-line Internet access for vital records management by Town Clerks, Hospitals, and Funeral Directors.

➢ *Water Quality Web Site* – joint Department of Environmental Services and UNH project to provide water quality data geographically, for agencies, Legislature, and the public.

3.6   Emergency Preparedness

- ***Continuity of Operations***   - ***Disaster Recovery Planning***
- ***Emergency Preparedness Planning***   - ***Emergency Preparedness Testing***
- ***Natural Disasters***

Continuity of Operations. The ability of State IT operations to protect critical IT resources, information, and operations to allow the State Agencies to carry out effective *Continuity of Operations* in the event of an Emergency.

Disaster Recovery Planning. Traditional IT planning focused on *Disaster Recovery Planning* to deal with failures in the core computing resources after they happened. This narrow view of emergency response will not meet today's real world threats to operations. As a preemptive step the IT infrastructure must be designed with redundancy and avoid single points of failure. This means that all new development and implementation efforts must consider the requirements of survivability at their inception and not as an afterthought. Traditional disaster recovery strategies such as backup sites, off site media storage and manual versions of business processes will continue to play a part in the whole of emergency preparedness. It is impossible to make systems infinitely redundant. At some point a series of multiple failures can make IT systems inoperable. This is the scenario where the traditional disaster recovery plans come into play.

Emergency Preparedness Planning. In addition to providing a survivable IT infrastructure and recovery strategies the State must be ready to expand the IT infrastructure to support the emergency response plans of the agencies. The roles of the executive departments in the emergency situations are being defined in on-going *Emergency Preparedness Planning* efforts. However, neither the timing nor the location of an emergency event can be predicted with any certainty. This uncertainty dictates that IT resources be available and configured to support the rapid deployment of state staff to temporary locations such as relocation centers, shelters, temporary offices and any other point of presence created to respond to an emergency. Responding effectively requires that not only must hardware and software resources be ready, but also personnel resources must be ready to leave traditional roles in software support and operations to take on emergency response roles.

Emergency Preparedness Testing. As with any *Emergency Preparedness Testing* efforts, planning is an important first step. However, training and testing must be done to ensure that "plans" can be implemented to provide acceptable operational results.

Natural Disasters. The effective operation of NH State government requires IT resources to be available and functioning properly. Unexpected *natural disasters* or man made events threaten this operation. The IT infrastructure must be designed to meet and survive these events.

4.0   Closing

The Office of Information Technology will align IT resources organizationally to meet the business needs of the State. There is a commitment to facilitating business process redesign to aid the State in making the best investments in Information Technology possible to help reduce overall costs to deliver state government services. The Office of Information Technology is first identifying the costs of IT for the state and will then reduce those costs where possible in order to make the IT organization its most efficient. Redundancies, inconsistencies, and missing support will be addressed this biennium.

The following drivers of IT will be the watchword and considered with every solution:

> - Centralize Common Services and Solutions;
> - Consistent Deployment of IT Solutions;
> - Consistent IT Procurement and Contracts;
> - Deliver Innovative IT Solutions;
> - Enhance Service Delivery;
> - Ensure All Agency IT Needs Are Satisfied;
> - Flexibility;
> - Leverage Technical Knowledge;
> - Remove Unnecessary Redundancies;
> - Manage IT Costs;
> - Maximize Technology to Drive Efficiency;
> - Protect Privacy;
> - Security; and
> - Survivability.

The Office of Information Technology is committed to be a world class operation, and to strive to meet the standard criteria for an organization of excellence!

Appendix A – Areas of State Government and Local Government

Areas of Government

New Hampshire's agencies, boards, and commissions are divided into six areas of government. The financial data in this section was obtained from the 2002-2003 Operating Budget, Chapter 130, Laws of 2001. **The six areas are**:

Education – This area includes the Department of Education, the Technical College System, the Sweepstakes Commission, and related organizations, which work to guide curricula, provide administrative support for public school districts, offer statewide educational leadership, increase student achievement, and generate revenue for public education.

The education area of government represents $1,255,224,073, or approximately 32% of the total State budget for fiscal year 2003.

Health and Social Services – With a wide range of services and support provided by DHHS and multiple veterans groups, this area of government is focused on meeting the health needs of New Hampshire's citizens. The organizations in this area provide treatment, support services, long-term care, and advocacy and preventative services to vulnerable citizens and to those with unique needs. Service providers strive to be responsive to the individual needs of each person and family they serve, to achieve measurable results, and to improve health, well being, and independence.

The Health and Social Services area of government represents $1,391,854,318, or approximately 35% of the total State budget for fiscal year 2003.

Justice and Public Protection – The safety and welfare of the State's citizens, businesses, and visitors is the responsibility of the organizations within the Justice and Public Protection area of government. The services include protection, oversight, and regulation of items including gambling, highway safety, insurance, liquor sales, and agriculture. Key tasks of this area of government are enforcing laws; providing emergency medical services; preventing deaths, injury, and property losses; and educating the public.

The Justice and Public Protection area of government represents $313,438,171, or approximately 8% of the total State budget for fiscal year 2003.

Resource and Economic Development – The State's resources include its forests, lakes, and rivers, as well as its economic climate. The departments and agencies within this area of government are focused on protecting and enhancing these resources in the State. To help protect existing resources, agencies focus on conserving and protecting fish, wildlife, and marine habitats and managing air quality, water quality and levels, and waste facilities. The focus on developing new resources incorporates economic development activities to increase and support tourism, to enhance the infrastructure for existing businesses, to attract new businesses, and to help companies expand sales within and beyond New Hampshire's borders.

The Resource and Economic Development area of government represents $181,429,414, or approximately 4% of the total State budget for fiscal year 2003.

Transportation – With over 4,000 miles of State and federal highways, 41 public and private airports, and 12 railroads to maintain and oversee, the activities in the transportation area of government are focused on keeping people, goods, and equipment moving to all parts of the State. The agencies in the transportation area of government are charged with designing, engineering, constructing, planning, testing, and regulating the State's infrastructure. They also collect data, assist with investigations, and assist federal and local governments with their duties.

The Transportation area of government represents $497,644,293, or approximately 13% of the total State budget for fiscal year 2003.
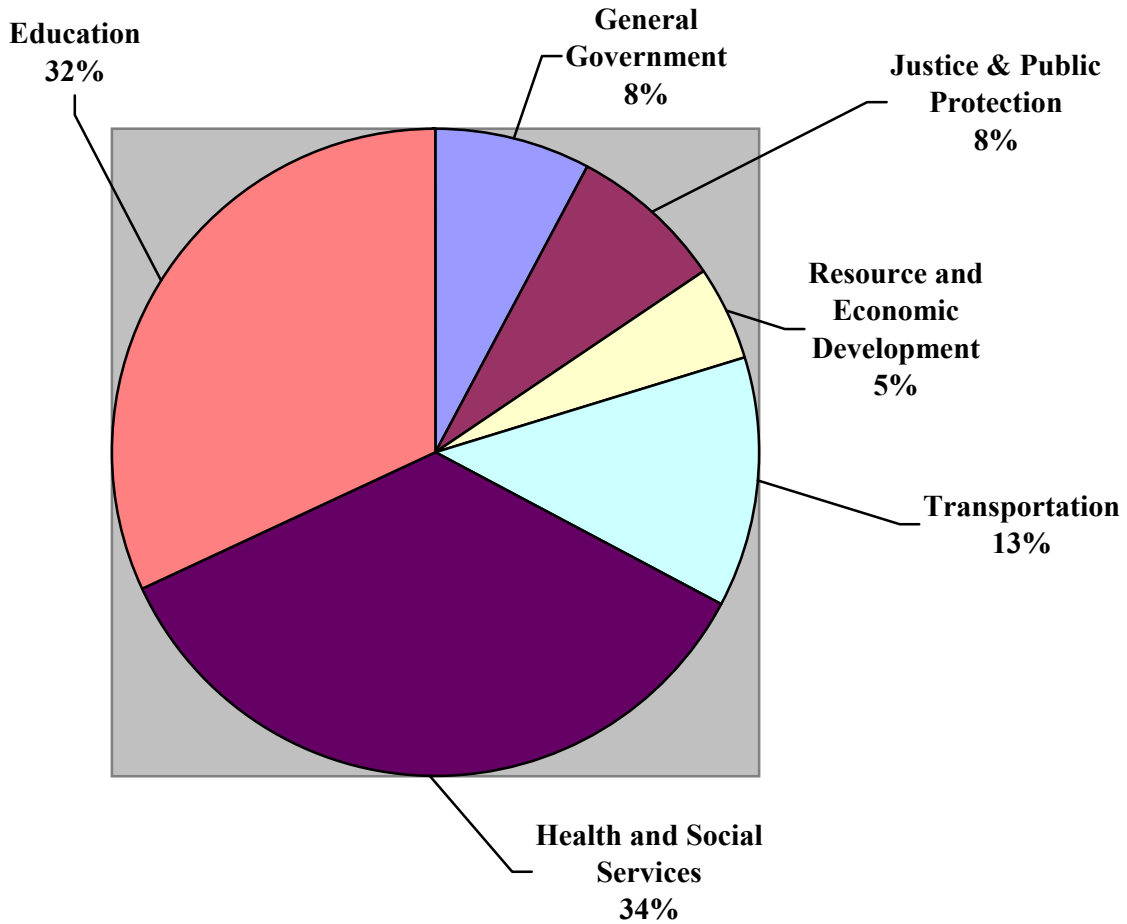
General Government – This area of government is responsible for providing services to all State agencies and improving overall operations. The agencies in this area conduct many different types of work. Managing the State's retirement system, planning for orderly development and use of State resources, developing cultural resources, providing services to reduce energy costs, implementing programs to empower and inform women, and increasing the economic independence of persons with disabilities are all important functions of this area of government. Agencies in this area oversee the use of statewide funds, ensure compliance with regulations, maximize interest earned on State funds, and assist local government entities with budget and taxation matters. Finally, agencies in this area of government maintain records, licenses, and filings related to businesses and certain professions.

The General Government area of government represents $304,784,579, or approximately 8% of the total State budget for fiscal year 2003.

Figure 1 summarizes the amount of the State of New Hampshire's FY 2003 budget that was allocated to each area of government.

Figure 1
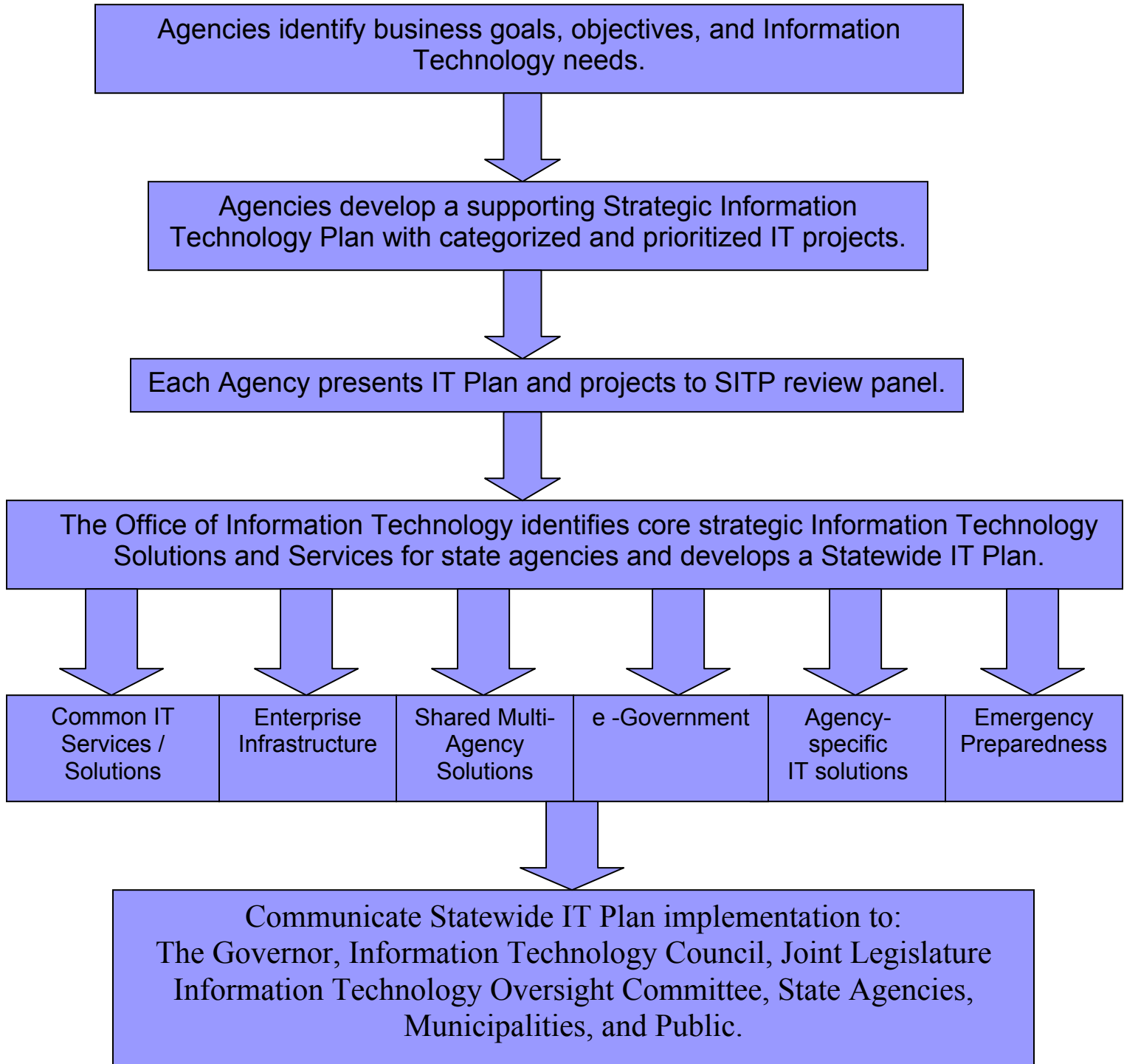
Percentage of NH FY 2003 state budget allocated to each area of government

Education
32%

General
Government
8%

Justice & Public
Protection
8%

Resource and
Economic
Development
5%

Transportation
13%

Health and Social
Services
34%

Appendix B - SITP SFY 2004-07 Agency SITP Review Process Flow

Information Technology Planning Process Flow

Agencies identify business goals, objectives, and Information Technology needs.

Agencies develop a supporting Strategic Information Technology Plan with categorized and prioritized IT projects.

Each Agency presents IT Plan and projects to SITP review panel.

The Office of Information Technology identifies core strategic Information Technology Solutions and Services for state agencies and develops a Statewide IT Plan.

| Common IT Services / Solutions | Enterprise Infrastructure | Shared Multi-Agency Solutions | e -Government | Agency-specific IT solutions | Emergency Preparedness |

Communicate Statewide IT Plan implementation to:
The Governor, Information Technology Council, Joint Legislature Information Technology Oversight Committee, State Agencies, Municipalities, and Public.

Special Thanks to the following people for their help and support:

State Agency Staff:

    Commissioners,
    Information Technology Leaders,
    Executive Directors,
    Division and Bureau Chiefs, and
    Business Office Staff

SITP Review Panel:

    Robert Anderson, *Chief Information Officer*

    William Armstrong, *IT Planner*

    Richard Bailey, *Director IT Operations*

    Dave Barker, *Manager IT Architecture*

    Frank Catanese, *Manager IT System Administration*

    Peter Croteau, *Director Embedded Agency Applications*

    Sally A. Gallerani, *Director IT Managed Support Services*

    Theresa Pare-Curtis, *Director Web Development*

    Tom Towle, *Manager IT Logistics*

    Mark Vernon, *IT Planner*

Meeting Facility:

    The Joint Board of Licensure and Certification Conference Room
    Louis Lavertu, Executive Director